

In the claims: The claims are as follows.

1. (Currently amended) A method for use by a second communication device in ~~of~~-deciding whether to perform link adaptation for communication from a first communication device to a-the second communication device, the link adaptation resulting in a change in coding or modulation or both, ~~the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device,~~ the method comprising the steps of:

examining a signal received from the first communication device and so providing a first indication of the quality of the signal as received by the second communication device;

a)- recording the first indication of the quality of the signal as received by the second communication device;

b)- providing a second indication of the quality of the signal;  
and

e)- deciding to perform link adaptation based on the first and second indication of the quality of the signal.

2. (Currently amended) The method of claim 1, wherein the first indication of the quality of the signal as received by the second communication device is ~~based on either an SIR estimate, or an ACK/NACK signal, or an FER or BLER or corresponding statistic collected over a predetermined time period.~~

3. (Currently amended) The method of claim 1, wherein the second indication of the quality of the signal as received by the second communication device is ~~based on either an SIR target value, or a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals.~~

4. (Original) The method of claim 3, wherein the decision to perform link adaptation is based on whether the SIR target is to be changed to a value that is within some predetermined margin of a predetermined maximum or minimum SIR target.

5. (Original) The method of claim 3, wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined number of consecutive SIR target change commands are all either to increase the SIR target or to decrease the SIR target.

6. (Original) The method of claim 3, wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined fraction of a predetermined number the SIR target change commands are either to increase the SIR target or to decrease the SIR target.

7. (Previously presented) The method of claim 1, wherein the first communication device is selected from the group consisting of a mobile station and a base station and the second communication device is the other device in the group consisting of the mobile station and the base station.

~~8. (Previously presented) The method of claim 1, wherein either the first communication device or the second communication device perform one or more of the steps of recording the first indication of the quality of the signal, providing a second indication of the quality of the signal, and deciding to perform link adaptation.~~

Claim 8 is canceled.

~~9. (Previously presented) The method of claim 1, wherein a radio network controller (RNC) performs one or more of the steps of recording the first indication of the quality of the signal, providing a second indication of the quality of the signal, and deciding to perform link adaptation.~~

Claim 9 is canceled.

10. (Original) The method of claim 1, wherein the signal for which the indication of the quality of the signal as received by the second communication device is used as a basis for a link adaptation decision is different from, but associated with, the signal for which the link adaptation decision is made.

11. (Currently amended) An apparatus for use by a second communication device in deciding whether to perform link adaptation for communication from a first communication device to a the second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the apparatus comprising:

means for examining a signal received from the first communication device and so providing a first indication of the quality of the signal as received by the second communication device;

a) means for recording the first indication of the quality of the signal as received by the second communication device;

b) means for providing a second indication of the quality of the signal; and

e) ~~\_\_~~ means for deciding to perform link adaptation based on the first and second indication of the quality of the signal.

12. (Currently amended) The apparatus of claim 11, wherein the first indication of the quality of the signal as received by the second communication device is ~~based on either an SIR estimate, or an ACK/NACK signal, or an FER or BLER or corresponding~~ statistic collected over a predetermined time period.

13. (Currently amended) The apparatus of claim 11, wherein the second indication of the quality of the signal as received by the second communication device is ~~based on either an SIR target value, or a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals.~~

14. (Original) The apparatus of claim 13, wherein the decision to perform link adaptation is based on whether the SIR target is to be changed to a value that is within some predetermined margin of a predetermined maximum or minimum SIR target.

15. (Original) The apparatus of claim 13, wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined number of consecutive SIR target change commands are all either to increase the SIR target or to decrease the SIR target.

16. (Original) The apparatus of claim 13, wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined fraction of a predetermined number the SIR target change commands are either to increase the SIR target or to decrease the SIR target.

~~17. (Previously presented) The apparatus of claim 11, wherein the first communication device is selected from the group consisting of a mobile station and a base station and the second communication device is the other device in the group consisting of the mobile station and the base station.~~

Claim 17 is canceled.

~~18. (Previously presented) The apparatus of claim 11, wherein the first communication device or the second communication device includes one or more of the means for recording the first indication of the quality of the signal, means for providing a second indication of the quality of the signal, and means for deciding to perform link adaptation.~~

Claim 18 is canceled.

~~19. (Previously presented) The apparatus of claim 11, wherein a radio network controller (RNC) includes one or more of the means for recording the first indication of the quality of the signal, means for providing a second indication of the quality of the signal, and means for deciding to perform link adaptation.~~

Claim 19 is canceled.

20. (Original) The method of claim 11, wherein the signal for which the indication of the quality of the signal as received by the second communication device is used as a basis for a link adaptation decision is different from, but associated with, the signal for which the link adaptation decision is made.

21. (Previously presented) The method of claim 1, wherein the link adaptation decision is based on a succession of signal quality indicators provided by a function that generates an

increase or decrease in signal quality indicator depending on whether or not a frame is correctly received.

22. (Previously presented) The apparatus of claim 11, wherein the link adaptation decision is based on a succession of signal quality indicators provided by a function that generates an increase or decrease in signal quality indicator depending on whether or not a frame is correctly received, and wherein both the first and second quality indicators are such quality indicators.

23. (New) A method of deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the method comprising the steps of:

recording the first indication of the quality of the signal as received by the second communication device;

providing a second indication of the quality of the signal;  
and

deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the second indication of the quality of the signal as received by the second communication device is either an SIR target value, a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals;

and further wherein the decision to perform link adaptation is based on whether the SIR target is to be changed to a value

that is within some predetermined margin of a predetermined maximum or minimum SIR target.

24. (New) A method of deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the method comprising the steps of:

recording the first indication of the quality of the signal as received by the second communication device;

providing a second indication of the quality of the signal;  
and

deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the second indication of the quality of the signal as received by the second communication device is either an SIR target value, a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals;

and further wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined number of consecutive SIR target change commands are all either to increase the SIR target or to decrease the SIR target.

25. (New) A method of deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication

device and providing a first indication of the quality of the signal as received by the second communication device, the method comprising the steps of:

recording the first indication of the quality of the signal as received by the second communication device;

providing a second indication of the quality of the signal;  
and

deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the second indication of the quality of the signal as received by the second communication device is either an SIR target value, a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals;

and further wherein a succession of SIR target change commands are recorded, and wherein the decision to perform link adaptation is based on whether a predetermined fraction of a predetermined number the SIR target change commands are either to increase the SIR target or to decrease the SIR target.

26. (New) A method of deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the method comprising the steps of:

recording the first indication of the quality of the signal as received by the second communication device;

providing a second indication of the quality of the signal;  
and



deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the link adaptation decision is based on a succession of signal quality indicators provided by a function that generates an increase or decrease in signal quality indicator depending on whether or not a frame is correctly received.

27. (New) An apparatus for deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the apparatus comprising:

means for recording the first indication of the quality of the signal as received by the second communication device;

means for providing a second indication of the quality of the signal; and

means for deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the second indication of the quality of the signal as received by the second communication device is either an SIR target value, a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals; and

wherein the decision to perform link adaptation is based on whether the SIR target is to be changed to a value that is within some predetermined margin of a predetermined maximum or minimum SIR target.

28. (New) An apparatus for deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the apparatus comprising:

means for recording the first indication of the quality of the signal as received by the second communication device;

means for providing a second indication of the quality of the signal; and

means for deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the second indication of the quality of the signal as received by the second communication device is either an SIR target value, a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals; and

wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined number of consecutive SIR target change commands are all either to increase the SIR target or to decrease the SIR target.

29. (New) An apparatus for deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the

apparatus comprising:

means for recording the first indication of the quality of the signal as received by the second communication device;

means for providing a second indication of the quality of the signal; and

means for deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the second indication of the quality of the signal as received by the second communication device is either an SIR target value, a changed SIR target value, an ACK/NACK signal, or a signal derived from a series of consecutive ACK/NACK signals; and

wherein a succession of SIR target change commands are recorded, and further wherein the decision to perform link adaptation is based on whether a predetermined fraction of a predetermined number the SIR target change commands are either to increase the SIR target or to decrease the SIR target.

30. (New) An apparatus for deciding whether to perform link adaptation for communication from a first communication device to a second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the apparatus comprising:

means for recording the first indication of the quality of the signal as received by the second communication device;

means for providing a second indication of the quality of the signal; and

means for deciding to perform link adaptation based on the first and second indication of the quality of the signal;

wherein the link adaptation decision is based on a succession of signal quality indicators provided by a function that generates an increase or decrease in signal quality indicator depending on whether or not a frame is correctly received, and wherein both the first and second quality indicators are such quality indicators.

31. (New) A system, comprising:

a first communication device;

a second communication device configured so as to be able to communicate with the first communication device; and

a controlling entity for controlling the second communication device in communicating with the first communication device;

wherein the second communication device includes an apparatus for use in deciding whether to perform link adaptation for communications from the first communication device to the second communication device, the link adaptation resulting in a change in coding or modulation or both, the second communication device examining a signal received from the first communication device and providing a first indication of the quality of the signal as received by the second communication device, the apparatus comprising:

means for examining a signal received from the first communication device and so providing a first indication of the quality of the signal as received by the second communication device;

means for recording the first indication of the quality of the signal as received by the second communication device;

means for providing a second indication of the quality of the signal; and

means for deciding to perform link adaptation based on the first and second indication of the quality of the signal.